

## Final Exam Review

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Date \_\_\_\_\_ Period \_\_\_\_\_

**Write each as an algebraic expression.**1) 20 decreased by  $x$ 

- A)  $20 - x$       B)  $x - 20$   
C)  $20x$       D)  $20 + x = 46$

2) the quotient of 6 and  $n$ 

- A)  $\frac{6}{n}$       B)  $n + 6 \leq 50$   
C)  $n - 6 \geq 38$       D)  $\frac{n}{6} \leq 34$

3) the product of  $k$  and 5

- A)  $\frac{k}{2}$       B)  $5 - k$   
C)  $k \cdot 5$       D)  $5^k$

4)  $x$  increased by 10

- A)  $x - 10 = 35$       B)  $\frac{10}{x}$   
C)  $x + 10$       D)  $\frac{x}{10}$

**Evaluate each expression.**5)  $5 \times 3 - 5$ 

- A) 14      B) 4  
C) 10      D) 9

6)  $3 - (3 - 3)$ 

- A) 8      B) 0  
C) 3      D) 5

**Evaluate each using the values given.**7)  $-6q - \left(r - \frac{p}{5}\right)$ ; use  $p = 5$ ,  $q = 6$ , and  $r = 7$ 

- A) -38      B) -42  
C) -45      D) -49

8)  $y(z + y)(x + z)$ ; use  $x = -6$ ,  $y = -1$ , and  $z = -4$ 

- A) -46      B) -50  
C) -45      D) -48

9)  $8r - 7 + p + r$ ; use  $p = 9$ , and  $r = -10$ 

- A) -88      B) -91  
C) -90      D) -80

10)  $-3p(n - m)^2$ ; use  $m = 1$ ,  $n = 3$ , and  $p = -7$ 

- A) 91      B) 80  
C) 84      D) 90

**Simplify each expression.**

11)  $p - 6(4p + 2)$

- A)  $-23p - 12$       B)  $-23p - 6$   
C)  $-23p - 5$       D)  $9 - 8p$

12)  $5 + 7(n - 4)$

- A)  $-28 + 12n$       B)  $-22 + 7n$   
C)  $-23 + 7n$       D)  $-28 + 7n$

13)  $-3m + 7(m + 8)$

- A)  $4m + 56$       B)  $-19m - 48$   
C)  $37m - 35$       D)  $-14m - 48$

14)  $3(6 + 8x) - 3$

- A)  $15 + 24x$       B)  $-42 - 10x$   
C)  $15 + 32x$       D)  $55 + 8x$

**Solve each equation.**

15)  $-105 = 15x$

- A)  $\{-90\}$       B)  $\{-7\}$   
C)  $\{-120\}$       D)  $\{-1575\}$

16)  $7a = 133$

- A)  $\{19\}$       B)  $\{931\}$   
C)  $\{126\}$       D)  $\{140\}$

17)  $-5k = -30$

- A)  $\{-35\}$       B)  $\{6\}$   
C)  $\{-25\}$       D)  $\{150\}$

18)  $-2n + 4n = 2$

- A)  $\{1\}$       B)  $\{-10\}$   
C)  $\{-8\}$       D)  $\{5\}$

19)  $-16 = -5v - 3v$

- A)  $\{1\}$       B)  $\{2\}$   
C)  $\{13\}$       D)  $\{4\}$

20)  $3b + 3 - b = 3$

- A)  $\{7\}$       B)  $\{8\}$   
C)  $\{0\}$       D)  $\{13\}$

21)  $-22 = 2x - 1 + 5x$

- A)  $\{-2\}$       B)  $\{-3\}$   
C)  $\{5\}$       D)  $\{-7\}$

22)  $-3(8x + 4) = -12 - x$

- A)  $\{0\}$       B)  $\{-10\}$   
C)  $\{8\}$       D)  $\{-3\}$

23)  $6 + 7n = 3(2 + 5n)$

- A)  $\{3\}$       B)  $\{-2\}$   
C)  $\{-14\}$       D)  $\{0\}$

**Solve each proportion.**

24)  $\frac{4}{6} = \frac{p}{7}$

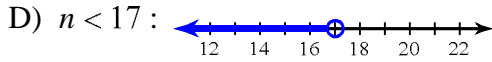
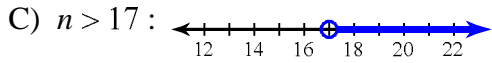
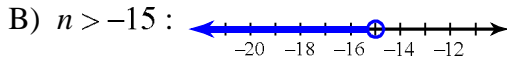
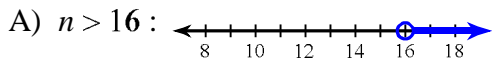
- A)  $\{4.66\}$       B)  $\{10\}$   
C)  $\{3.9\}$       D)  $\{4.2\}$

25)  $\frac{5}{10} = \frac{2}{m}$

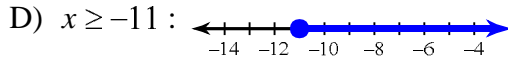
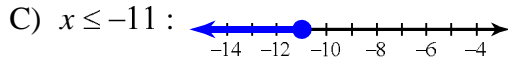
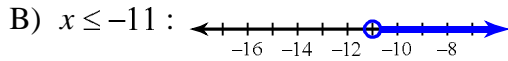
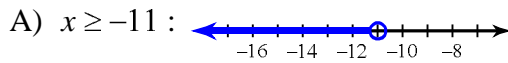
- A)  $\{2\}$       B)  $\{6.7\}$   
C)  $\{4\}$       D)  $\{4.2\}$

**Solve each inequality and graph its solution.**

26)  $n - 1 > 16$



27)  $11 + x \leq 0$



**Solve each inequality.**

28)  $-114 \geq 6(6 - 4m) - 6$

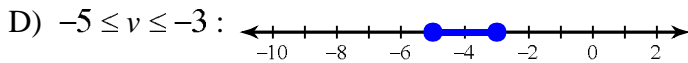
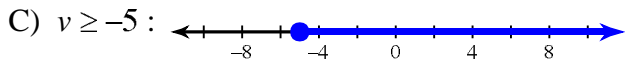
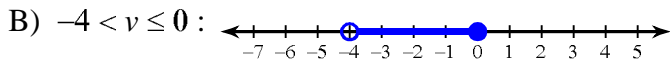
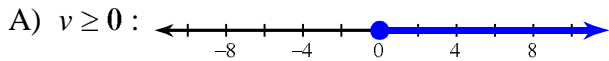
- A)  $m \leq -6$       B)  $m \geq 6$   
C)  $m \geq -6$       D)  $m \geq 1$

29)  $-72 \leq -6 - 6(r + 5)$

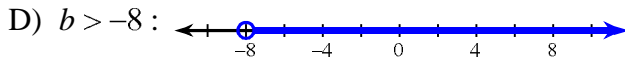
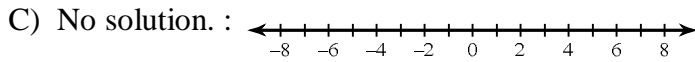
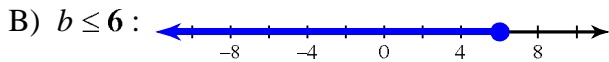
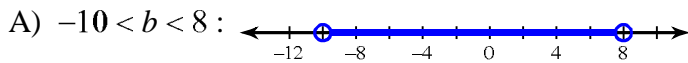
- A)  $r \leq 3$       B)  $r \geq 3$   
C)  $r \leq 6$       D)  $r \leq -12$

**Solve each compound inequality and graph its solution.**

30)  $-1 < \frac{v}{4} \leq 0$



31)  $5b > -50$  and  $b - 10 < -2$



**Solve each absolute value equation.**

32)  $\frac{|4x-3|}{6} = 1$

- A)  $\left\{\frac{9}{4}, -\frac{3}{4}\right\}$       B)  $\left\{-6, \frac{28}{3}\right\}$   
C)  $\left\{\frac{9}{4}\right\}$       D)  $\left\{-\frac{7}{5}, 5\right\}$

33)  $|-3-5x| - 5 = 12$

- A)  $\left\{-4, \frac{14}{5}\right\}$       B)  $\{-2, 4\}$   
C)  $\{-4\}$       D)  $\{-9, 10\}$

34)  $3 + |8-4a| = 31$

- A) No solution.      B)  $\left\{\frac{15}{2}\right\}$   
C)  $\left\{\frac{15}{2}, -5\right\}$       D)  $\{-5, 9\}$

**Find the slope of the line through each pair of points.**

35)  $(14, 16), (19, 20)$

- A)  $-\frac{5}{4}$       B)  $\frac{4}{5}$   
C)  $-\frac{4}{5}$       D)  $\frac{5}{4}$

**Write the slope-intercept form of the equation of each line given the slope and y-intercept.**

36) Slope =  $-4$ , y-intercept =  $-1$

- A)  $y = -4x - 1$   
B)  $y = -x + 4$   
C)  $y = 4x - 1$   
D)  $y = -2x + 4$

37) Slope =  $\frac{5}{3}$ , y-intercept =  $0$

- A)  $y = -\frac{5}{3}$       B)  $y = -\frac{3}{5}x - 1$   
C)  $y = -\frac{5}{3}x$       D)  $y = \frac{5}{3}x$

**Write the slope-intercept form of the equation of each line.**

38)  $x + 4y = -20$

- A)  $y = -\frac{1}{4}x - 5$       B)  $y = x - 5$   
C)  $y = -\frac{1}{2}x - 5$       D)  $y = -x - 5$

39)  $y = 3(x - 1)$

- A)  $y = -3x - 3$   
B)  $y = 3x - 3$   
C)  $y = -x - 3$   
D)  $y = -3x - 1$